Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V (DRAFT) NO. V-99-028
MARATHON ASHLAND PETROLEUM
CATLETTSBURG REFINING LLC - MARINE REPAIR TERMINAL

MAY 30, 2000
STUART ECTON, B.S. CHEMICAL ENGINEERING/ REVIEWER
PLANT I.D. # 103-0340-0016
APPLICATION LOG # F950

SOURCE DESCRIPTION:

The Marathon Ashland Petroleum Marine Repair Terminal consists of:

a) Truck Unloading station (Lube Oil)
b) Truck Loading station * (Heavy Oil, Light Oil and Styrene)
c) Seven Black Fixed Roof Storage Tanks three of which are oil water separators
d) One Internal Flotation Roof Storage Tank
e) Barge Painting
f) Hot Water Barge Cargo area Cleaning
g) Three Boilers: Two 10.2mmBtu/hr and one 12.5mmBTU/hr
h) Various pipeline equipment: pumps, valves and flanges.
i) Barge Loading of Light Rerun and Heavy Rerun.

*- Not in operation as of the date of the last inspection.

The three boilers provide hot water for cleaning the empty barges. These boilers are fired with either material recovered from the heavy oil barges or #2 fuel oil. No surfactants or additives are used in the barge cleaning process. The tanker shell clingage along with the displaced vapor is vented directly to the atmosphere and is by far the largest emitter of VOC at an actual annual rate of 225 TPY. The contents of the barge are vacuum pumped into the various storage tanks/oil-water separators or to the truck loading rack. The truck loading rack has not operated for several years and may be demolished and removed from the site.
There are also two Dissolved Air Floatation units for treatment of water before it is piped to the city sewer system.

COMMENTS:

All indications are that this source has been major for VOC and HAPs since before the county was redesignated attainment for ozone. Therefore all regulations that applied to major sources in non-attainment areas should have been applicable to the source. Regulations 401 KAR 59:095, New oil-effluent water separators and 401 KAR 61:045, Existing effluent oil water separators, do not apply to tanks 1 ,2 and 3 because they are not affected facilities due to the fact they do not handle any hydrocarbons with a vapor pressure of 0.5 psia or greater. The source does claim that 401 KAR 61:045 and 401 KAR 59:095 apply to

the two DAF units (EP04) even though it is unclear if the vapor pressure of the hydrocarbons being handled there is 0.5 psia or greater. However, non CTG RACT applies to the barge cleaning operation since it was and is, by itself, a major source of VOC. This is addressed by the draft permit by requiring an overall capture and control efficiency of 95%. This requirement is similar to the gasoline loading MACT codified as 401 KAR 63:002 (40 CFR 60 Subpart R).

The NESHAPS 401 KAR 57:035, Subpart V (40 CFR 61.240) and 401 KAR 57:040, Subpart J *do not* apply to the pipeline equipment because this terminal does not meet the definition of a "process unit" as defined by the applicability sections of these regulations. Therefore, no leak detection and repair program is required for the pumps, flanges and valves that make up the pipeline components.

Since gasoline is not now nor is it proposed to be loaded at the existing tanker truck loading rack, Regulations 401 KAR 61:055, Existing bulk gasoline terminals and 401 KAR 61:056, Existing bulk gasoline plants, *do not* apply and no controls are required on this equipment. Also, since gasoline is not loaded onto barges. Regulation 401 KAR 63:002 (40 CFR 63 Subpart Y), National emission standards for marine tank vessel loading operations, *does not* apply.

TYPES OF CONTROLS:

Tank 4: an internal floating roof with a primary seal prescribed by **401 KAR 59:485 (40 CFR 60 Subpart Kb)**.
401 KAR 63:002 (40 CFR 63 Subpart II) National emission standards for shipbuilding and ship repair (surface coating): MACT controls: low solvent, etc.

The draft permit contains requirements for the capture and control of VOC from the barge cleaning operation. It is the Division's opinion that Regulation 401 KAR 50:012, General application, applies to the barge cleaning process and that an overall capture and control efficiency of 95% is RACT in this specific case. It also appears that this operation alone has had the potential to emit more than 100 TPY VOC since it was constructed. This fact alone makes it subject to Kentucky's non CTG RACT provisions.

EMISSION FACTORS:

AP-42 For combustion of Fuel Oil
AP-42 Fugitive Emission Factors
AP-42 For Storage Tanks
AP-42 Emission Factors for loading tanker trucks and cleaning/loading barges

APPLICABLE REGULATIONS:

401 KAR 50:012, General application. (Barge Cleaning)
401 KAR 59:015, New indirect heat exchangers, commenced on or after April 9, 1972.
401 KAR 59:485, (40 CFR 60 Subpart Kb) Standards of performance for volatile organic liquid storage vessels for which construction, reconstruction or modification commenced after July 23, 1984.
401 KAR 59:095, New oil-effluent water separators, commenced on or after April 9, 1972.
401 KAR 61:045, Existing oil-effluent water separators, commenced before June 29, 1979.
401 KAR 63:002 (40 CFR 63 Subpart II) National emission standards for shipbuilding and ship repair (surface coating)
See comments above for an explanation of why the various regulations applicable to pipeline equipment do not apply.

EMISSION AND OPERATING CAPS DESCRIPTION:

No thinners in the paint are allowed as per the applicable MACT **401 KAR 63:002** (40 CFR 63 Subpart II).

PERIODIC MONITORING:

Semi-annual method 9 readings on the boilers are required.

Periodic gap checks etc. as required by Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb).

Periodic monitoring and/or parametric monitoring will be required on the control system that the source is required to propose for Non-CTG RACT. Once the controls have been proposed and approved, the permit will be reopened and these requirements will be added. This is the reason for the nonspecific language in the permit under EP 15 (Barge Cleaning).

OPERATIONAL FLEXIBILITY:

The permit requires Marathon Ashland to propose the specific type of capture and control device. This allows them the flexibility to choose between carbon adsorption, incineration, flaring or an equivalent system.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or record keeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.